University of Alberta

Self-perceptions, Observed Free Play Behavior, and School Problems in Children with Internalizing, Externalizing, and Combination Behavioral Profiles

By

Jocelyn Anne Wilkie

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Abstract

The purpose of this study was to examine group differences in self-perception, behavioral observations, and school problems in children exhibiting internalizing, externalizing, and combination behavioral difficulties. This study also attempted to determine how estimates of social functioning uniquely and jointly contributed to teacher ratings of student behavior. Participants were 212 inner-city grade 1 through 4 students. Results from univariate and multivariate analyses indicated group differences in the percentage of time children spent alone on the playground, self-perceptions of anxiety, and degree of teacher-rated school problems. Results from multiple regression analyses suggested that emotional symptoms and percentage of time spent alone on the playground were predictive of teacher ratings of internalizing problems. School maladjustment and percentage of time spent negatively engaged with peers on the playground were predictive of teacher-ratings of externalizing problems. School maladjustment and percentage of alone and negative behavior on the playground were predictive of overall behavioral problems.

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CHAPTER ONE

Introduction

Overview of Issue

Elementary students who exhibit extreme forms of social problems (e.g., poor social competence) are typically categorized into one of three types of emotional behavioral disabilities (EBD). For example Renouf, Kovacs, and Mukerji (1997) described each of the EBD categories as breaking down into the following: (a) externalizing problems, which are characterized by disruptive or aggressive behaviors, (b) internalizing problems, which are characterized, by depressive, withdrawn, or anxious behaviors, and (c) combination of externalizing and internalizing problems. EBD in elementary students is most often identified by teachers using behavioral rating scales. Much of the research in the area of EBD advocates for the early identification of these disorders (e.g., Broidy et al., 2003; Flanagan, Bierman & Kam, 2003) and recognizing that this is a heterogeneous group. Therefore, it is important for researchers and clinicians, when working with this population, to distinguish between these three groups (McConaughy & Skiba, 1993). The current study aims at gaining a better understanding of the differential functioning of EBD profiles in hopes of influencing the design of early identification programs tailored to students' social interactive strengths and weaknesses.

For the elementary school student, the ability to establish and maintain effective interactions with peers is one of the most important components of healthy social development (Ladd & Burgess, 1999; Rose-Krasnor, 1997). For young students

in the lower elementary grades (e.g., 1-4), observed peer interactions are best sampled on the playground during recess breaks. Effectiveness in interactions can be assessed using observational methods that provide an objective measure of the individual child's actual performance in a setting relatively free of adult control (e.g., Blatchford, 1998; Merrell, 2003). Those studies that have explored the links between social competence and observed peer interactions have tended to focus on conflict negotiation tasks contrived in the laboratory setting (Dodge, 1980; Rudolph, Hammen, & Burge, 1995; Rudolph, Hammen, & Burge, 1995) or during structured classroom or play sessions (Hinshaw, Han, Erhardt, & Alice, 1992; Hymel, Rubin, Rowden, & LeMare, 1990; Wright, Zakriski, & Drinkwater, 1999). Although free play behavior has been compared to teacher ratings of behavior and social skills (e.g., Farmer-Dougan & Kaszuba, 1999; Shinn, Ramsey, Walker, Stieber, & O'Neill, 1987; Snyder, et al., 2003; Walker & Hill, 1994) to date, the link between elementary students' social competence as measured by naturalistic observations of peer interactions in a free play setting have not been extensively explored.

In addition, the role of self-perceptions as a measure of social competence in the elementary school setting has been a focus of increasing study (Boivin & Begin, 1989; Easterbrooks & Abeles, 2000; Ladd & Troop-Gordon, 2003; Marsh, Craven & Debus, 1998; Patterson, Kupersmidt & Griesler, 1990; Rudolph, Hammen & Burge, 1995; Treuting & Hinshaw, 2001). However, the use of self-perceptions has received mixed support as young children vary in their ability to provide accurate accounts of their social acceptance among peers (Harter, 1999; Marsh et al., 1998). The

relationship between teacher reports of behavior and self-perceptions has been of interest to researchers (e.g., Hymel et al.,1990; Ladd & Troop-Gordon, 2003; Raboteg-Saric et al., 2001), and clinicians who assess and work with students with EBD. However, few studies have examined the relationship between teacher-rated externalizing, internalizing, and combination problems and self-perceptions and observed peer interactions.

Teachers tend to perceive students with EBD as having poor interpersonal skills in the classroom and may consider them to be overly disruptive or withdrawn in an academic or social group setting (e.g., Merrell 2003; Trout, Nordness, Pierce & Epstein, 2003). In addition, students with EBD tend to demonstrate poor academic outcomes and have significant learning problems that persist over time (Anderson, 2001). However, less is known about how teacher rated school problems differ across EBD classifications. Thus, the present study investigated the extent to which subgroups of EBD differed on teacher-ratings of school problems.

In summary, there are two main goals in this study. The first is concerned with EBD group differences on self-perceptions of social competence, teacher-rated school problems, and observed free play behavior at school. The second goal takes into account that teacher ratings of behavior are the most common method of assessing young children's social behavior in the school setting (Stranger & Lewis, 1993) but that less is known about how self-perceptions or observed peer interactions contribute to our understanding of teacher-ratings of behavior (see Merrell, 2003 for a review). Therefore this study also examined the extent to which self-perceptions and observed

peer interactions uniquely and jointly predict teacher ratings of behavior problems in the school setting.

CHAPTER TWO

Literature Review

The following section will first focus on defining social competence and providing an overview of Crick and Dodge's (1994) social information processing theory and how it may be utilized to describe the social competence of children with EBD. Next, a review of the literature concerned with studying EBD using observational methods will be provided. Pertinent theorists and studies that have influenced our current knowledge of children's self-perceptions and the use of self-perceptions to assess social competence of children with and without EBD will be covered. Finally, there will be a brief review of the literature linking EBD with school problems.

Social Competence and Social Information Processing Theory

In her seminal review paper on social competence, Rose-Krasnor (1997) found that the most common definition of social competence in elementary students was "effectiveness in interactions" which includes both self and other perspectives. According to Rose-Krasnor (1997) the study of social competence may be broken down into four general types of operational definitions: (a) specific skills which may include either self reports or observations of specific social skills; (b) sociometric status which may include peer nominated status (e.g., being liked or disliked by a peer group); (c) relationships which normally include reports of quantity and quality of friendships; and (d) functional outcomes which may include an assessment of one's social problem solving ability.

With respect to peer interactions, the behaviors that most often accompany ineffective interactions include aggressive, hostile, or withdrawn behaviors. Elementary students that demonstrate these behaviors are typically rejected or neglected by their peers (Crick, 1996; Dodge, 1980; Ladd, 1999). Theorists have used social information processing theories of children's social functioning to argue that children come to a social situation with a set of biologically predetermined capabilities and a "data base" of memories of past experiences (e.g., Crick & Dodge, 1994). The social information processing model proposed by Crick and Dodge (1994) is one of the most widely referred to models in the area of social competence. This model contends that a child's behavioral response whether it is aggression, hostility, or withdrawal, is a function of processing cues from the environment. Children who have ineffective peer interactions may be experiencing a deficit in any one or a combination of several of the steps involved in the social information processing model (e.g., Dodge, 1980; Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Quiggle, Garber, Panak, & Dodge, 1992). These steps according to Crick and Dodge (1994) include: (a) encoding of external and internal cues, (b) interpretation and mental representation of those cues, (c) clarification or selection of a goal, (d) response access or construction, (e) response decision, and (f) behavioral enactment. While students with EBD may demonstrate atypical processing during any of these steps, it is most often the student's behavioral enactment that is measured and therefore the indicator of problematic social information processing.

Researchers generally agree that there are not only overlapping qualities but distinct differences between the EBD groups with respect to perceived social self competence (Ladd & Burgess, 1999; Quiggle et al., 1992; Renouf et al., 1997; Treuting & Hinshaw, 2001) and observed peer interactions (Rudolph et al., 1994; Wright, Zakriski & Drinkwater, 1999). However, most studies have limited their discussion to middle and late childhood or adolescence due to the difficulties obtaining reliable self-reports of competence with early childhood (6-7 years of age). In addition, as noted by Ladd and Burgess (1999), little is known about the self-perceptions and peer interactions of students who demonstrate both internalizing and externalizing problems. Students with internalizing problems generally have been shown to perceive themselves as having low social acceptance among peers (Ladd & Troop-Gordon, 2003) while students with externalizing problems demonstrate similar self-perceived social acceptance as non-EBD peers (Boivin & Begin, 1989). According to the literature that has included a combination group, these students tend to have poor self-perceptions of social competence (Ladd & Burgess, 1999) and peer interactions characterized by both aggression and withdrawal (Rudolph et al., 1994; Wright et al., 1999).

Dodge (1980) demonstrated that children with externalizing problems may not be encoding and interpreting cues from the environment appropriately and thus have a tendency to make inaccurate presumptions about others intentions. Using Crick and Dodge's (1994) model, children with externalizing problems may attribute hostile intentions to their peers' social behavior. This hostile attribution bias may be based

on repeated exposure to situations in which their peers reacted negatively to their behavior, and thus, has contributed to an overly aggressive knowledge structure or social schemata (Burks, Laird, & Dodge, 1999). Research on the social information processing of aggressive and depressed children conducted by Quiggle (1992) and colleagues provided additional evidence that suggested that students with externalizing problems may be interpreting neutral cues from their peers as aggressive or hostile. In addition the adverse reaction to an externalizing child's aggressive behavior by their peers (rejection or retaliation) may not be perceived by the externalizing child as stemming from their own behavior and hence the belief, "I don't have a problem, everyone else does" becomes part of their social schemata.

According to Crick and Dodge (1994) children with internalizing problems on the other hand, appear to be encoding and interpreting the cues in their environment more appropriately. Their perception of low social self competence is accurate although they may tend to over-generalize or exhibit all or none thinking to a greater extent than non-EBD peers (e.g., one peer says he does not want to play with me, therefore all peers do not want to play with me). Based on Crick and Dodge's (1994) social information processing model, students with internalizing problems may therefore have a limited range of social knowledge and overly negative social schemas to draw upon due to chronic avoidant behavior. Ladd and Burgess (1999) hypothesized that these students may lack the behavioral repertoire because of limited experience interacting with peers. For example, Quiggle et al. (1992) found that depressed children were more likely to report that they become behaviorally passive

and ineffective in response to what they perceived to be a negative situation with their peers. On the other hand, Quiggle and colleagues concluded that students with a combination of internalizing and externalizing problems demonstrated both aggressive and depressed attribution styles. This was confirmed by Ladd and Burgess' (1999) study which also found combination students to have interactions characterized as both withdrawn and aggressive, which was similar to the withdrawn behavior of a pure internalizing group and the aggressive behavior of a pure externalizing group. Hence, with respect to social competence, especially when interacting with peers, this group is considered to be the most at-risk.

Direct Observation of Peer Interactions

A unique component of the current study is the use of a standardized behavioral observation tool to code and interpret free play behavior. Observational data collected in a naturalistic setting such as the playground, is considered to be one of the most ecologically valid methods of assessing children's social skills (Kamphaus & Frick, 2002; Merrell, 2001). Although some studies have included behavioral observations of students identified as exhibiting either internalizing or externalizing behaviors (Dodge, 1980; Hinshaw, et al., 1992; Rudolph et al., 1994; Shinn et al., 1987; Wright et al., 1999) the majority of these studies employed smaller subsets of children observed in laboratory settings.

An example of a study that used behavioral observations to predict internalizing and externalizing profiles in fifth grade boys was conducted by Shinn et al. (1987). The study conducted direct observations of peer-to-peer social behavior in

playground settings and duration measures of academic engagement within the classroom. In addition, the authors collected teacher ratings of student social skills and as well as an analysis of school records. The results of the Shinn et al. (1987) study indicated that when compared to normal controls, the at-risk students: (a) spent less time academically engaged, (b) showed higher rates of verbally negative behavior during peer interactions, (c) were rated by their teachers as substantially less skilled socially and (d) had school records that demonstrated serious disciplinary problems.

Shinn et al. (1987) argued that children at-risk for externalizing problems can be distinguished from normal students on the basis of key school behaviors. As well, the authors put forth the notion that negative, rather than positive, social behavior at recess was a powerful and consistent variable in discriminating at-risk and control students in this study. This study provides compelling evidence for the use of behavioral observations as a predictor of externalizing problems.

The findings from the Shinn et al. (1987) study were extended by the work of Wright et al. (1999) which utilized a sample of 83 children. An internalizing group, externalizing group, mixed group, and non-EBD group were compared based on observations of their social interactions. The observation system utilized by Wright et al. (1999) differed from that used in the Shinn et al. (1987) study and the timed interval observation system to be used in the current study in that a recorder was to observe the target child during a 45 minute activity period, after which he or she would fill out a record form which asked whether the target child encountered each of

the 7 social contexts (e.g., "adult praised the child verbally" or "peer bossed, bullied, or threatened") and whether the target child demonstrated any of the 10 responses (e.g., "hit or physically attacked" or "withdrew, isolated self"). A 3 point Likert-type scale was used to indicate the intensity of each response.

Results of the Wright et al. (1999) study indicated that the EBD categories demonstrated complex patterns of behavioral responses to contexts and differed in their likelihood of encountering social situations. For example, children with internalizing problems showed elevated rates of withdrawal {change this spelling throughout – it is misspelled in several places] and depressed rates of aggression in response to aversive situations but deviated little from population base rates in other, less aversive situations. Children with externalizing problems on the other hand, showed that they deviated little from population means in most situations but displayed elevated aggression in response to being teased or threatened by peers. Unlike the internalizing group, children with combination profiles showed aggression instead of withdrawal to being teased or threatened by peers, and in contrast to the externalizing group, they showed elevated rates of aggression in several situations (rather than just in response to being teased or threatened by peers).

In addition children with combination profiles were both withdrawn and aggressive in response to non threatening peer interactions which provides evidence for their inability to appropriately interpret their peers' intent. This group was therefore rated as more deviant by their teachers than either the pure internalizing or externalizing group which is commensurate with an additive model of problematic

behaviors and social skills seen in students with a combination of internalizing and externalizing problems (Quiggle et al., 1992). While the Wright et al. (1999) study provides preliminary analysis of the behavior demonstrated by students with combination profiles, replication is required to further validate an additive model.

Self-perception

Clinicians and researchers have often asked whether or not children's self-perceptions of the social environment are an important aspect of the measurement of social competency. The self-perception literature indicates that there are important links between self-perception of social competency and behavior (see Berndt & Burgy, 1996 for a review). Children who tend to see themselves as competent also tend to demonstrate competence in those particular domains. Children who tend to see themselves as incompetent in particular domains also tend to perform relatively less well than their age matched peers in those areas. Thus, self-perceptions may become an indicator of performance. Unfortunately this assumption becomes problematic in the case of students who demonstrate internalizing and/or externalizing behaviors (Boivin & Begin, 1989; Kim & Cicchetti, 2003) or in very young children (Marsh, Craven & Debus, 1998). The discrepancies between perceived social competence and actual performance as rated by teachers have been of particular interest in the literature on emotional behavioral disorders (Hymel et al., 1990). These discrepancies may provide insight into the social information processing of very young elementary students and students with emotional behavioral

disturbances. What is less well known is whether or not self-perceptions are as predictive of teacher ratings of social competence as behavioral observations.

Development of self-perception in early to middle childhood

Early to middle childhood typically includes children in the age range of 5 to 7 years (Harter, 1999). Self-representation in early to middle childhood is viewed somewhat differently than in children in middle to late childhood and adolescence. Harter and Pike (1984) concluded that children under the age of 8 are unlikely to be able to distinguish between their performance and success in different domains of life. These researchers also suggested that very young children's self-representations reflect concrete descriptions of behaviors, abilities, emotions, possessions, and preferences. Young children's accounts of self-representations are also highly differentiated and are often reported in a disjointed manner. Harter (1999) noted that the disjointedness of very young children's self-representations was due to cognitive limitations that did not allow them to integrate or organize characteristics under a common construct. In addition, their self-representations are often unrealistically positive, since they lack social comparison skills that would allow them to distinguish between ideal and real self-concepts. Harter maintained that young children are also unable to acknowledge that they can possess attributes or emotions of opposite valence (e.g., happy and sad). She attributed this characteristic to young children's all-or-none thinking.

Supporters of the social information processing theory would cite a limited working memory capacity as the main reason for these immature representations of

the self in early to middle childhood (Crick & Dodge, 1994). Because of their limited ability to process more than one concept at a time, very young children may be unable to differentiate between specific domains of self-perceived competency or provide a global sense of self worth. This theory would also account for their difficulty comparing their own with the perspectives of others as this requires a greater demand on working memory than they are developmentally capable of.

Harter and Pike (1984) considered these cognitive limitations in young children when designing an assessment tool to measure the perceived competence of this age group. The *Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (*PSPC; Harter & Pike, 1984*)* addresses these issues by assessing two domains of acceptance (peer and maternal) along with the two additional domains of competence (physical and cognitive). Unlike the *Self-perception Profile for Children* (SPPC; Harter 1985*)* designed for middle childhood, a separate domain of global self worth is not included in the PSPC. In addition, Harter (1983) argued that self-concept measures must be adapted to fit the child's level of cognitive development therefore, simple language intended for young children, and pictorial representations were used by Harter and Pike (1984) to facilitate the assessment of perceived competence in young children.

However, some researchers (e.g., Marsh et al., 2002) argue that the inability of past research to demonstrate that young children can differentiate between perceived and actual competence is partially due to the psychometric limitations of the current measures available (e.g., Harter and Pike's PSPC). Marsh et al. (1998; 2002) work

provides moderate support for the hypothesis that children as young as four years of age can differentiate between academic and non-academic self-concepts. However, Marsh et al. (2002) did not compare the children's responses on the self-concept measure to actual performance measures of social competence (i.e., teacher or observation measures) and were limited to teacher ratings on the very same instrument the children completed in the 1998 study. Therefore it is safe to assume that further research in the area of young children's self-perceptions of peer acceptance is required before a more comprehensive understanding of young children's ability to discern between actual and perceived social competence is realized.

For the purposes of this study, social competence in early to middle childhood will be defined and estimated as effectiveness in interactions (e.g., Rose-Krasnor, 1997). Therefore, the domain of peer interactions and how students in early to middle childhood perceive their acceptance among their peers is of interest. The present study will assess early to middle childhood self-perceptions of peer acceptance and compare these self-perception reports to the teacher ratings of behavior as well as the students' interactions with peers during recess breaks.

Self-perceptions of students with internalizing, externalizing, and combination problems

Several studies have concentrated on comparing elementary students' perceived social competence with teacher ratings of behavior, peer nominated sociometric status in the school setting, or both (Boivin & Begin, 1989; Patterson et

al., 1990; Easterbrooks & Abeles, 2000; Kim & Cicchetti, 2003), and have contributed to our understanding of the developmental trajectories of self-perceptions over time (Hymel, et al., 1990; Keiley, Bates, Dodge & Pettit, 1999; Ladd & Troop-Gordon, 2003; Renouf et al., 1997). In addition, these studies have provided evidence regarding the differences indicated by self-perceptions held by individuals who demonstrate either internalizing or externalizing profiles. Some pertinent studies that have investigated the relationship between EBD and self-perceptions will be discussed below.

A study by Easterbrooks and Abeles (2000) investigated the links between global self worth, social competence, and behavioral functioning in 8-year olds. Self, teachers, and parents were used as informants for the study. The study addressed important issues around the developmental trajectory of self-concept in young children recognizing that many children do not admit to negative aspects of the self, even when pressed. The authors hypothesized that 8-year old children would report a largely positive view of themselves and that this would be associated with positive behavioral outcomes.

The results of the Easterbrooks and Abeles (2000) study indicated that children who were more at ease with the interview process and answering questions about themselves (self-perceptions) had fewer mother and teacher reported behavioral problems, more effective peer interactions, and flexibility or adaptability with their school demands. As well, the authors noted that children who reported greater self-worth demonstrated fewer behavior problems in school and were more socially

competent with their peers. These results have implications for the current study, as it provides support for the hypothesis that positive self-perceptions will be positively related to fewer teacher-rated internalizing and externalizing problems for children 8 years and older.

Another investigation that examined the relationship between self-perceptions and behavioral outcomes conducted with students in grades 5 and 6 (ages 11-14, mean age 12.6 years old,) revealed that self-perceptions of positive behavioral conduct and social acceptance were consistently negatively related to young girls' and boys' behavior problems (Raboteg-Saric et al., 2001). The SPPC (Harter, 1985) was used as a measure of self-concept while behavioral outcomes were measured using a self-report format that investigated academic grades, alcohol use, cigarette smoking, school misconduct, and deviant behavior. The results of the Raboteg-Saric et al. (2001) study provide support for the hypothesis that self-perceptions of social acceptance are negatively related to self-reported behavioral problems. Neither the Easterbrooks nor the Abeles (2000) and the Raboteg-Saric et al. (2001) study looked at self-perceptions of children who demonstrate internalizing or externalizing profiles.

In a longitudinal study conducted by Hymel et al. (1990), the association between early social difficulties and indices of both externalizing and internalizing problems in later childhood was examined prospectively. The researchers found that self-perceptions of social competence as measured in grade 2 students using Harter's (1982) Perceived Competence Scale (cognitive, social, and physical competence domains) were significant predictors of perceptions of social competence, general

self-worth, and loneliness 3 years later. Their findings provide support for the stability of self-perceptions over time. With respect to teacher ratings of behavior, the researchers discovered that externalizing behavior in grade 2 was not significantly related to social self-perceptions in either grade 2 or 5. Findings from the Hymel et al. (1990) study also indicated that in both grades 2 and 5 self and peer ratings of internalizing problems were associated with negative self-regard, but aggression was not.

In conclusion, the Hymel et al. (1990) study provided supportive evidence that there are distinct differences in social self-perceptions for children who exhibit externalizing versus internalizing behavioral profiles as rated by their teachers. This leaves the question of how do children with comorbid EBD profiles compare on measures of social self-perceptions.

In a similar study to that of Hymel et al. (1990), Ladd and Troop-Gordon (2003) studied the links between: (a) teacher ratings of behavior in kindergarten, (b) peer relational histories, (c) self-perceptions of social self competence as measured by the SPPC with internalizing problems, externalizing problems, and loneliness in grade 4. Their sample consisted of 193 girls, and 206 boys who were assessed annually from age 5 to age 10. The researchers utilized a child-by-environment model in which early behavioral risks (teacher ratings) were linked directly with chronic peer relationship adversity. Next, paths representing hypothesized mediated links were added, including links from each form of chronic relations adversity to self and peer beliefs. Finally, self or peer beliefs were linked to internalizing or externalizing

problems and loneliness. As with the Hymel et al. (1990) study, early-emerging behavioral problems in kindergarten were directly linked with later forms of internalizing and externalizing behaviors. In addition, the Ladd and Troop-Gordon study indicated that children's chronic peer relationship experiences were significant antecedents of later forms of internalizing and externalizing problems.

Despite these two findings, Ladd and Troop-Gordon (2003) argued that their third finding was the most important. This final finding provided support for a mediated child-by-environment model. The authors hypothesized that chronic peer relationship adversity would increase a child's exposure to negative relational processes or learning experiences and that the accumulation of these experiences would be a more powerful risk factor than the strains in current relationships. Their findings suggested that those children who had longer histories of peer rejection also had lower perceived social-self acceptance. The researchers argued that this finding was consistent with the notion that chronic exposure to peers' rejecting attitudes and behaviors caused the children not only to recognize that they were disliked by age mates but also to see themselves in a negative light with respect to self worth and social acceptance. This link was associated with later internalizing but not externalizing problems. Similar to the study conducted by Hymel et al. (1990) the authors concluded that externalizing problems at early ages did not contribute to the formation of negative social self-perceptions. This finding demonstrates that students with externalizing problems may have significant difficulty with perspective-taking

since their perceptions of their own social competence is often incongruent with those of their peers.

None of the studies previously discussed (Easterbrooks & Abeles, 2000; Hymel et al., 1990; Ladd & Troop-Gordon, 2003; Raboteg-Saric et al., 2001) examined social competence in children with both internalizing and externalizing problems. A study by Renouf et al. (1997) addressed this issue using a longitudinal design to test the hypothesis that the co-occurrence of internalizing (depressive) and externalizing (conduct) disorders during late childhood and early adolescence had a particularly deleterious effect on social functioning for children between the ages of 8 and13. The authors defined social competence in terms of self-esteem, social problem-solving skills, activities, and peer relationships as rated by the mother. Self-esteem was not explicitly defined by the authors but was cited as an important indicator of social functioning because of its role in resiliency and positive social adaptation. This study followed a group of clinic-referred juveniles who had been repeatedly assessed over several years until approximately 16 years of age.

At each assessment interval those individuals who were diagnosed as having either conduct disorder or depressive disorder had lower maternal ratings of social competence than those individuals deemed as being free from either conditions. Furthermore, the Renouf et al. (1997) study indicated that having both disorders predicted greater impairment in social competence than having only one or the other condition. The researchers concluded that this effect was additive rather than multiplicative. The findings also indicated that depressive disorder was associated

with low self-esteem during any given observation interval. A history of any given condition (depressive disorder, conduct disorder or both) was associated with lower self-esteem when compared to the remainder of the youth in the study. The researchers concluded that the psychopathological conditions examined in the study appeared to have more detrimental effects on social competence than on self-esteem (Renouf et al. 1997).

While the findings of the Renouf et al. (1997) study provide some information regarding the self-esteem perceptions of young adolescents with comorbid internalizing and externalizing disorders, the findings are limited to a clinically referred population. The measure of self-esteem is also limited in that the SEI score used in this study was an average taken from a combination of attitudes toward the self in areas of social, academic, family, and personal experiences. Individual scores for each of these areas were not provided and therefore the findings are limited in describing the relationship between comorbid disorders and specific domains of self-perceptions such as social acceptance.

Several studies have made the distinction between self-perceptions in internalizing versus externalizing disorders (Kim & Cicchetti, 2003; Boivin & Begin, 1989; Hymel et al., 1990; Raboteg-Saric et al., 2001). Predominately internalizing but not externalizing disorders have shown a pattern of lower self ratings of global self worth and social competence. The co-occurrence of internalizing and externalizing disorders has been well established in the literature (Ladd & Troop-Gordon, 2003; McConqughy & Skiba, 1993; Weiss & Catron, 1994) however few

studies have looked at how comorbidity was related to self-perceptions of social competence, global self-worth, and personality (Renouf et al., 1997) especially in early to middle childhood. In summary, the current study will attempt to address this issue by comparing the self-perceptions of early to middle childhood elementary students who demonstrate internalizing, externalizing, and combination profiles.

EBD and Teacher-Rated School Problems

Teachers often consider learning and attention problems to be indicative of academic and school maladjustment (Anderson, 2001). Research on children with EBD suggests a strong link between EBD and learning/attention problems (see Trout et al. 2003 for a review). Presently, more research has explored the link between externalizing behaviors such as aggression and academic failure than the link between internalizing disorders and academic problems (Newcomer & Barenbau, 1995). This may partly be due to the assumption that externalizing features (e.g., aggression toward peers and misconduct in the classroom) may be more easily recognized by teachers than the internal states (e.g., depression and anxiety) common to students with internalizing problems. However, even less is known about the risks posed by comorbid behaviors on academic functioning. As mentioned earlier, much of the literature on EBD hypothesizes that comorbid children would have more academic and social competency problems than would children with externalizing or internalizing profiles alone. This hypothesis is best described using an additive model (Quiggle et al., 1992).

Overview of Present Study

The aim of the current study was to investigate the similarities and differences between subgroups of children with and without EBD based on observed free play behavior, self-perceptions of social competency, and teacher-rated school problems. In addition, this study will attempt to discern how the two main indices of social competence (self-perceptions and behavioral observations) uniquely and jointly predict teacher-rated behavioral problems. The self-perceptions of social competence for children under the age of 8 years have received considerably less attention in the literature than those of their older counterparts (Marsh et al., 1998). Therefore an exploratory analysis will be performed with this group by comparing their self-perceptions of peer acceptance with their teacher's rating of behavior. Based on the additive model (Quiggle et al., 1992) students 8 years and older who have a combination profile are expected to have the most problems with social competency based on behavioral observations and self-perceptions as well as school related problems (learning and attention deficits) as rated by their teachers. It is predicted that the students with a combination profile will have both qualities of the students with internalizing and externalizing problems during free play (e.g., spend more time alone and engaged in a negative way when interacting with peers). This additive hypothesis, while endorsed in previous findings (e.g., Wright et al., 1999; Ladd & Burgess, 1999) has yet to be sufficiently explored using behavioral observations of free play peer interactions. A brief summary of this study's hypotheses is listed below.

Hypotheses and Research Questions

Self-perception

Harter (1999) has argued that middle childhood marks a time when a developmental shift occurs in self-perceptions. She suggested that as children move from early to middle childhood their ability to differentiate between various areas of competence increases. However, empirical research has shown that despite their unsuccessful interactions with peers, students with externalizing problems tend to perceive themselves as having few if any social or emotional problems (Ladd & Troop-Gordon, 2003) while children with internalizing problems tend to see themselves as having significant social and emotional problems (Ladd & Burgess, 1999).

Self-perception hypothesis. It is hypothesized that students in the current study who are 8 years old or older and who have teacher rated internalizing problems will see themselves as being depressed, experiencing significant social stress, anxiety, interpersonal relations problems, poor social acceptance and poor global self-worth as compared to students without behavioral problems. Based on the findings of Quiggle et al. (1992) that students with both internalizing and externalizing problems demonstrated depressed attribution styles in addition to aggressive attribution styles, the students with combination problems in this sample are also expected to see themselves similarly to the students with internalizing problems when compared to the students without behavioral problems.

Self-perception research question. Do students 7 years old or younger, who have teacher-rated internalizing problems, externalizing problems, or both perceive their acceptance among peers to be better, worse, or similar to students without behavioral problems?

Behavioral Observations

Studies that have utilized behavioral observations to study social competency in children with EBD have found that students with externalizing problems tend to spend more of their time negatively engaged with peers than those students without externalizing problems (Shinn et al., 1989; Walker & Severson, 1992). Students with internalizing problems have been reported to spend more of their free time alone than those students without internalizing problems (Walker & Severson, 1992) while the students who demonstrate both externalizing and internalizing problems have been shown to display both withdrawn and aggressive behavior toward their peers (Rudolph et al., 1994; Wright et al., 1999).

Behavioral observation hypothesis. Based on previous findings (e.g., Walker & Severson, 1992; Wright et al., 1999) students who have internalizing problems or a combination of internalizing and externalizing problems are expected to spend a greater percentage of their free play time alone than students without behavioral problems. Also students who have externalizing problems or combination problems are expected spend a greater percentage of their free play time interacting in a negative way with peers than the students without behavioral.

School Problems

Research in the area of EBD and academic status (e.g., Trout et al., 2003) suggests that students with behavioral problems are rated by their teachers as having more school problems than those students without internalizing or externalizing problems.

School problems hypothesis. It is predicted that students with combination problems will have the most teacher rated school problems compared to the students with internalizing problems, externalizing problems, or students without behavioral problems.

Behavioral Observations and Self-perceptions as predictors of Teacher-rated Behavioral Problems

Much of the literature concerned with the measurement of social competence in the elementary grades advocates for the use of multi-informant and multi-behavioral problem profiles to provide the most valid representation of the child's functioning (Flanagan, Bierman, & Kam, 2003; Kamphaus & Frick, 2002; Kraemer, et al., 2003; Merrell, 2001). In the current study the use of self-perception data was paired with behavioral observation data. Several studies have provided evidence to support the use of self-perception data (e.g., Boivin & Begin, 1989; Patterson et al., 1990; Easterbrooks & Abeles, 2000; Kim & Cicchetti, 2003; Ladd & Troop-Gordon, 2003; Renouf et al., 1997) and behavioral observation data (Wright et al., 1999; Shinn et al., 1987; Snyder et al., 1999) to predict social competence in the school setting.

However, less is known about how well self-perceptions and behavioral observations predict teacher ratings of behavioral problems.

Predictors of EBD research question. How well do the two constructs (self-perceptions and behavioral observations) uniquely and jointly predict teacher ratings of internalizing, externalizing, and overall behavioral problem profiles?

CHAPTER THREE

Research Methods and Design

Overview

The current research took place as part of a larger investigation of social and literacy development in children participating in a research project studying the effects of an in-school mentoring program conducted by a non-profit volunteer based community agency. Data collection for this research project began in the winter of 2004 and its completion is projected for the spring of 2005. Data collected in the spring of 2004 was used for the current study.

Participants

Twenty three predominately inner-city schools from a Western Canadian city consented to participate in the larger study. Two hundred and fourteen students were given permission to participate by their parents or guardians. Of those, 211 students' data were utilized in the current study (99 boys, 112 girls; age range = 5 years, 11 months – 11 years, 3 months; M = 8 years 4 months). Three students were not included because their data was incomplete. Approximately half of the students had been paired with an adult volunteer (mentor) who visited the school on a weekly basis to assist with literacy and social skill development.

Measures

The present study utilized measures of self-perception, teacher ratings of behavior and school problems, as well as direct behavioral observations. A detailed description of each of the measures is provided below.

Behavioral Assessment System for Children (BASC; Reynolds & Kamphaus, 1992)

The BASC is a multimethod, multidimensional approach to measuring the adaptive skills and behavioral difficulties (externalizing and internalizing problems) of children ages 4 to 18 years. Merydith (2001) noted that this assessment system is now being used by school psychologists in social-emotional assessments almost as frequently as the Child Behavior Checklist and the Teacher Report Form (Achenbach, 1991). Reynolds and Kamphaus list five components of the BASC that can be used individually or in combination. These components include the Teacher and Parent Rating Scales (TRS and PRS), the Self-Report of Personality (SRP), the Structured Developmental History (SDH), and the Student Observation System (SOS). For the purposes of this study in which the interest was in teacher ratings of behavior and self-perceptions of elementary students, the SRP-C and TRS-C were utilized.

School Problems and EBD Classification

Behavioral Assessment System for Children – Teacher Rating Scale (BASC TRS-C; Reynolds & Kamphaus, 1992). The Teacher Rating Scales (TRS) is a comprehensive measure of both adaptive and problem behaviors in the school setting. It is designed for use by teachers or others who fill a similar role, such as teacher aides. The TRS child level (TRS-C) is designed to target children between the ages of 6-11 years. The form contains descriptors of behaviors that the respondent rates on a four-point scale of frequency over the past 6 months (1 = Never, to 4 = Almost Always). Scores are reported in the form of *T-Scores* ($M = 50$, $SD = 10$) and percentiles are provided for each subscale as well as for the five composite scales.

The TRS assesses clinical problems in the domains of externalizing problems, internalizing problems, and school problems as well as adaptive skills. It is made up of the four composites; Externalizing Problems, Internalizing Problems, School Problems, and Adaptive Skills and a broad composite, the Behavioral Symptoms Index. Fourteen scale scores make up the composites. For the purpose of this study, the Externalizing, Internalizing, Behavioral Symptoms Index and School Problem composites were used in the analysis.

Reynolds and Kamphaus (2002) report that the BASC TRS was normed on 2,401 teachers at 116 testing sites between the fall of 1988 through the spring of 1991. Reliability data provided by the authors indicates that internal consistency for the BASC TRS Scales ranges from high .70s to low .90s and low to mid .90s for the Composites. Test-retest reliability for the Scales ranges from high .70s to low .90s and the interrater reliability for the TRS-C ranges between the .50s to .80s. Validity data for the BASC TRS indicates that the structure of scales and composites were based on factor analysis of items and scales. Item content was based on teachers', parents' and children's input as well as feedback from psychologists and reference sources such as the *Diagnostic and Statistical Manual of Mental Disorders: DSM IV* and other instruments.

Self-perceptions

Behavioral Assessment System for Children – Self Report of Personality Child Level (BASC SRP-C; Reynolds & Kamphaus, 1992). The SRP-C is an omnibus personality inventory consisting of statements to which the child responds as either

true or false. The SRP-C measures the self-perceptions of children ages 8-11 years. Items are presented in a True or False format. It is made up of the composite scores: School Maladjustment, Clinical Maladjustment, Personal Adjustment, and an overall composite score, the Emotional Symptoms Index (ESI). The SRP-C has 12 scales which are grouped in composites. The scale scores of Depression, Social Stress, Anxiety, and Interpersonal Relations were selected for group comparison analysis because the authors suggest that high scores on these scales are indicative of internalizing problems in children between the ages of 8-11 years. The four composite scores on the BASC SRP-C were used in the correlational analysis.

This instrument can be interpreted in relation to national age norms (general, female, and male) as well as clinical norms. The general age norms where used to interpret the data for this study. Similar to the BASC TRS-C all scores are reported as *T*-scores ($M = 50$, $SD = 10$). Special indexes are incorporated to assess the validity of the child's responses. These indexes include the patterning and consistency indexes, F index, and the V index designed to detect invalid responses due to poor reading comprehension, failure to follow directions, refusal to respond seriously to the task, or poor contact with reality.

Reynolds and Kamphaus (2002) reported that the BASC SRP-C was normed on 9,861 students based on a large national sample that was representative of the population of U.S. children with regard to sex, ethnicity, clinical and special education classifications. Reliability data provided by the authors indicates that internal consistency for the BASC SRP-C Scales ranges from .70 to .80s and high

.80s to mid .90s for the Composites. Reliability data was not computed for the BASC SRP and TRS-C in the current sample because these measures were scored using the BASC Assist computer scoring program. The computer program provides reliability checks and flags those tests that have potential problems. Individually scored protocols that were flagged by the computer scoring program were re-scored to determine if there were errors in entering the data. Test-retest reliability for the Scales is reported to be mostly in .70s and .80s. Similar to the BASC TRS-C, validity data for the BASC SRP-C was based on factor analyses of the items and scales.

The Self-Perception Profile for Children (SPPC; Harter, 1985). The SPPC is a 36-item scale comprised of five domain-specific subscales and one global self-worth subscale. The domain-specific subscales are Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, and Behavioral Conduct. Harter (1985) reported factor-analytic data that confirmed the use of these subscales. The SPPC has been employed in a number of developmental and social development studies (Shevlin, Adamson, & Collins, 2003) and is founded on a strong theoretical model based on the work of James (1890/1983) and Cooley (1902). Harter (1985) based the SPPC on the premise that perceived competence in the domains considered important to the individual are strongly predictive of self-worth. The author reported internal reliabilities between 0.71 and 0.86 for the subscales. In the current sample, internal reliability on the SPPC was established using Cronbach's Alpha. Internal reliabilities were 0.67 for the Social Acceptance subscale and 0.78 for the Global Self-Worth subscale.

The Pictorial Scale of Perceived Competence (PSPC; Harter & Pike, 1984). The PSPC was designed as a downward extension of the original predecessor of the SPPC, the Perceived Competence Scale for Children (PCPC; Harter, 1982). The PSPC was intended for children in "pre-school to second grade" and the major difference between the PSPC and the SPPC is the use of pictures and individual administration. Internal reliability coefficients were not reported in the manual. Factor analysis of the PSPC yielded two factors, Competence and Acceptance (Harter & Pike, 1984). The competence factor is made up of the Physical and Cognitive competence subscales while the acceptance factor consists of the Peer and Maternal acceptance subscales. For the purpose of the current study, only the Peer Acceptance subscales were utilized. Internal reliability for the Peer Acceptance subscale on the PSPC score for the current sample was 0.82.

Behavioral Observations.

Systematic Screening for Behavioral Disorders (SSBD; Walker & Severson, 1992). Playground observations were conducted under unstructured, free-play conditions during recess. *The Peer Social Behavior* (PSB) observation system (Walker & Severson, 1992) was used to record the student's free-play behavior. The observation code included five categories (i.e., social engagement, participation, parallel play, alone and no codeable response). One of the five codes was recorded during each 10-second interval. The target student's behavior was coded as positive or negative in the social engagement or participation categories. Specific behavioral criteria for defining the categories, as well as examples of positive and negative

verbal and nonverbal interactions, are provided in the training manual (See Walker & Severson, 1992).

The user's manual also provides normative criteria and cutoff percentage points. The PSB component of the SSBD is considered by Merrell (2001) to be an excellent exemplar of a standardized behavioral observation tool. In his review of the tool, Merrell (2001) indicated that extensive research went into the development of the PSB, and the validity evidence and technical properties reported in the manual and in other sources are impressive (e.g., Walker & Severson, 1994). In the technical manual accompanying the SSBD, the authors report the average interrater agreement to be 85% with a range between 80 and 90%. Interrater agreement was established in the current sample using the method outlined in the technical manual for the PSB. The PSB interrater agreement was calculated according to the following formula: PSB interrater agreement equals intervals with agreement divided by total number of intervals multiplied by 100. Reliability checks were conducted during 9 of the playground observations, with the average agreement being 89%.

The technical manual also indicates that the PSB has acceptable discriminant validity when compared to teacher ratings of externalizing and internalizing behavior. For example, using a discriminant function analysis procedure, Walker et al. (1990), found that the PSB correctly classified 84.69% of the students who had been rated by their teachers as having internalizing, externalizing, and no behavioral problems.

Procedure

Before the data were collected for the larger study, University ethics was obtained. Next, permission was obtained from the school administration at each school, including the principal and the teachers that would be involved. Once permission from the school was obtained, teachers were asked to nominate those students in grades 1 through 4 whom were either already involved with the mentoring program or who required assistance with core academic subjects and/or social skills and would therefore benefit from participation in the mentoring program. Teachers were provided with and asked to send letters of information and consent forms describing the study home to parents or guardians. A copy of the information letter and consent form is provided in Appendix B and C, respectively. Students who received consent to participate in the study were assigned numbers, which were used in place of the student's name to ensure confidentiality.

Five trained research assistants administered all measures to the students during school hours in a one to one or small group setting (2-3 students). The research assistants conducted all observations during free play (recess hours) and were trained by a researcher using the observer training manual for the PSB, as well as accompanying videotapes. Quizzes provided in the training manual were used to determine the research assistant's mastery of the concepts presented. In addition, videotapes of playground settings, during which the research assistants could practice coding behaviors, were used to provide examples and assess the accuracy of coding during the training. The research assistants completed paired observations of the same

target child for their first 1-2 on-site sessions to establish inter-rater reliability. Paired observations were continued until a minimum of 80% interobserver agreement was met before collecting data on their own. The amount of observational data collected for each student ranged from 7.5 to 15 minutes (M = 12 minutes, SD = 3 minutes).

Teachers who gave written consent to participate in the study were asked to complete the BASC TRS-C during the spring of 2004. One hundred ninety BASC TRS-C forms were received for students participating in the study. Teachers received a small cash honorarium for returning completed BASC TRS-C forms. No data was collected on the teachers themselves.

CHAPTER FOUR

Results

In this chapter, the results from the current investigation are presented. First the descriptive analyses are reported and compared to the norms available for the tasks. Second, the targeted behavioral and Non-EBD profile are compared using univariate and multivariate analysis of variance. Lastly, correlations between the variables along with multiple regression analyses was included to determine which social competence measures were most predictive of teacher ratings of behavioral problems.

Descriptive Analysis

The students who had a BASC TRS-C completed by their teacher were classified into one of four subgroups: (a) Students without behavioral problems or Non-EBD, (b) students with internalizing problems, (c) students with externalizing problems, and (d) students with a combination of internalizing and externalizing problems. The grouping of students was based on a predetermined cutoff score of 1 standard deviation above the mean ($T \geq 60$) on the BASC TRS-C. The authors, Reynolds and Kamphaus, consider students who score 1 standard deviation above the mean or a *T-Score* range of 60-69 to have mildly to moderately elevated symptoms or to be at-risk for developing symptoms. Using the cutoff score of 1 standard deviation above the mean the following group sizes were formed: students with externalizing problems ($n = 29$, 16 males; 13 females), students with internalizing problems ($n =$ 22, 9 male; 13 females), students with a combination of internalizing and

externalizing problems (n = 33, 24 male; 9 females), and Non-EBD (n = 105, 37 male; 68 females) which were students who had an Internalizing and Externalizing Composite T-score of less than 60.

Means and standard deviations for all participants are reported in Table 1. An additional table outlining the means and standard deviations for each of the sub-groups is provided in Tables 2 through 5. The BASC TRS-C, BASC SRP-C, SPPC, and SSBD were all presented to participants in the standardized format, and therefore the results from these tasks can be compared to the reported norms for these tasks. When the participants are examined as a whole, all scores on the BASC TRS-C and BASC SRP-C fall within the average range (T = 40 – 59), however the School Problems Composite mean of 58.52 approaches the At-Risk range (T = 60-69).

The SSBD manual provides norms for the Peer Social Behavior observational coding instrument. Norms are provided for students with externalizing problems, internalizing problems, and normal groups of students in grades 1-6. The normal group's mean and standard deviation for the Alone and Total Negative scores reported in the manual are M = 4.65; SD = 8.91 and M = 2.26; SD = 5.59 respectively (Walker & Severson, 1992). The current sample mean and standard deviation for Alone was M = 7.51; SD = 13.01 and for Total Negative it was M = 1.96; SD = 4.38. On the Alone and Total Negative scores the manual reports the additional means and standard deviations for students with externalizing problems ([Alone] M = 8.53; SD = 13.76, [Total Negative] M = 7.10; SD = 10.36) and for students with internalizing problems ([Alone] M = 10.07; SD = 15.26, [Total Negative] M = 1.73; SD = 4.04).

For the current sample the following means and standard deviations were found: for students with externalizing problems ([Alone] $M = 4.59$; $SD = 7.51$, [Total Negative] $M = 2.90$; $SD = 4.31$), internalizing problems ([Alone] $M = 16.95$; $SD = 21.82$, [Total Negative] $M = 1.82$; $SD = 5.60$) and a combination of externalizing and internalizing problems ([Alone] $M = 10.65$; $SD = 18.79$, [Total Negative] $M = 2.36$; $SD = 4.51$). In summary, it appears that the students with externalizing problems in the current sample displayed less negative behavior than would be expected based on the students with externalizing problems norm group. The students with internalizing problems in the current sample had similar if not higher Alone behavior than the norm group. Finally, the students with both externalizing and internalizing problems had a profile that was very similar to the students with internalizing problems in the norm sample on Alone as well as Total Negative behavior.

The SPPC norms for the Social Acceptance and Global Self-worth subscales are presented according to grade and gender. The third and fourth grade norms were compared to the current sample. The manual reports Social Acceptance subscale scores ranging from $M = 2.56$; $SD = .78$ (girls in fourth grade) to $M = 2.97$; $SD = .77$ (boys in fourth grade). These scores are similar to those reported in the current sample for each sub-group with the exception of the students with internalizing problems ($M = 2.25$; $SD = .64$). Scores on the Global Self-worth subscale were very similar to those in the SPPC norm sample (Harter, 1985). Norms are not available for the PSPC and therefore could not be compared to the current sample.

Behavioral Subgroup Comparisons

With respect to the group comparisons, two sets of analyses were conducted based on age of the child and an additional two sets of analyses were conducted using the entire sample. The first analysis consisted of those participants 8 years old and older who had completed the BASC SRP-C and/or SPPC. The second analysis was conducted with participants 7 years old and younger who had completed the PSPC. This group was relatively small ($n = 41$) therefore they were subdivided into only one of two groups: students with externalizing problems, internalizing problems, or both, or students without behavioral problems. The students with behavioral problems consisted of the students who had a *T* score on the BASC TRS-C equal to or greater than 60 on the Externalizing and/or Internalizing Composite.

The third and fourth set of analyses consisted of all participants who had a BASC TRS-C completed by their teacher and behavioral observations completed during free play. This group was first sub-divided into the four groups based on the BASC TRS-C scores and then compared on observed behaviors and the severity of school problems as rated by teachers. Gender and grade differences were not analyzed because inclusion of this factor would have created small and disparate cell sizes and unreliable mean estimates for the EBD groups.

Self-perception Hypothesis

The first hypothesis was that students with internalizing problems and combination problems would have self-perceptions of higher social stress, anxiety, depression, worse interpersonal relations, lower global self worth, and worse social

acceptance among their peers than students without behavioral problems. Two One-way MANOVAs were run to test this hypothesis. The first MANOVA used the behavioral subgroups as the independent variable and the subscale scores on the BASC SRP-C as the dependent variables. The second MANOVA used two of the SPPC subscales as the dependent variables.

One hundred fifteen students completed the BASC SRP-C. Sixty-eight of the students did not have behavioral problems, 17 had externalizing problems, 14 had internalizing problems, and 16 had both externalizing and internalizing problems. The means and standard deviations are presented in Tables 2 through 5. To assess whether there were group differences between the students with internalizing problems, externalizing problems, combination problems, and Non-EBD based on the Social Stress, Anxiety, Interpersonal Relations, and Depression scale scores on the BASC SRP-C, a One-way MANOVA was run using the behavioral groups as the independent variable and the BASC SRP-C scale scores as the dependent variables. Group differences were significant at the 0.01 level, Wilks' Lambda = .843, $_{multi}F$ (12,103) = 1.587, p = .095. Tukey post hoc analyses showed that students with internalizing problems (M = 56.36, SD = 10.10) reported significantly more anxiety when compared to students without behavioral problems (M = 47.72, SD = 10.33) on the BASC SRP-C subscale of Anxiety, F (3,114) = 2.715, p = .048.

Children who were 8 years old or older at the time of testing were administered the SPPC. One hundred and sixteen children completed this instrument. Once subdivided based on their BASC-TRS scores, 69 of the students did not have

behavioral problems, 17 students had externalizing problems, 14 students had internalizing problems, and 16 students had combination problems. The group means and standard deviations are presented in Tables 2 through 5. To assess whether group differences existed between the four groups based on the Social Acceptance and Global Self-worth subtest scores on the SPPC, a One-way MANOVA was used with the behavioral groups as the independent variables and the two SPPC subtest scores as the dependent variables. No group differences were found, Wilks' Lambda = .944, ${}_{multi}F$ (6,110) = 1.077, p = .377, *ns*.

Self-perception Research Question

Students under the age of 8 completed the PSPC. Because only 74 students were in this age range, they were sub-divided into one of two groups (students with behavioral problems or students without behavioral problems) based on a cutoff *T* score of 60 on either the Internalizing Composite or Externalizing Composite. To assess whether a group difference would occur between the students with behavioral problems and students without behavioral problems on the Peer Acceptance subtest score on the PSPC, a univariate analysis of variance was used with the behavioral groups as the independent variables and the Peer Acceptance subtest score as the dependent variables. No significant group difference was found between the students with behavioral problems and students without behavioral problems (M = 3.14, 3.19, SD = 0.71, 0.87 respectively), F(1, 68) = .074, p = .786, *ns* indicating that regardless of teacher rated behavioral problems, the younger children did not consider themselves to be experiencing difficulties with peer acceptance.

Behavioral Observation Hypothesis

All students who had behavioral observation data were included in the following analysis. Based on their BASC TRS-C scores, the groups were students without behavioral problems ($n = 105$), students with externalizing problems ($n = 29$), students with internalizing problems ($n = 17$), and students with combination problems ($n = 21$). The groups were entered into a One-way MANOVA as the independent variable and the Percentage of Alone Behavior and Total Negative Behavior on the playground were entered as the dependent variables. A significant difference was found, Wilks' Lambda = .897, ${}_{multi}F(6, 166) = 3.08$, $p = .006$ ($\eta^2 = .05$, Power = .91). Tukey post hoc analyses showed that students with internalizing problems ($M = 16.95$, $SD = 21.82$) spent significantly more time alone on the playground when compared to students without behavioral problems ($M = 5.73$, $SD = 9.31$), $F(3,171) = 5.066$, $p = .002$. No significant differences were found on the Percentage of Alone Behavior between the students without behavioral problems ($M = 5.73$, $SD = 9.31$) and students with combination problems ($M = 10.65$, $SD = 18.79$), and no significant differences were found on the Total Negative Behavior between the students without behavioral problems ($M = 1.57$, $SD = 4.24$) and students with externalizing problems ($M = 2.90$, $SD = 4.31$) or between students without behavioral problems and students with combination problems ($M = 2.36$, $SD = 4.32$)

School Problems Hypothesis

To determine whether or not the students with combination problems would be rated as having more school problems than students with internalizing problems,

externalizing problems, or students without behavioral problems, a One-way ANOVA was run using the student groups as the independent variable and the School Problems Composite score from the BASC TRS-C as the dependent variable. Of the 197 students who had a BASC TRS-C completed, 116 students were without behavioral problems, 32 students had externalizing problems, 22 students had internalizing problems, and 27 had combination problems. A significant group difference was found $F(3, 194) = 22.27$, $p = < .001$ ($\eta^2 = .26$, Power = 1.00). Tukey post hoc analyses showed that students with combination problems ($M = 67.63$, $SD = 9.48$) were considered by their teachers to have significantly more school problems when compared to students without behavioral problems ($M = 53.95$, $SD = 10.48$). However, the students with combination problems were not considered to have significantly more school problems than either the students with internalizing problems ($M = 61.00$, $SD = 7.76$) or externalizing problems ($M = 65.68$, $SD = 7.76$).

Table 1

Means and Standard Deviations for All Participants

	Total Sample		
Age and Grade	N	M	SD
Age (year and month)	212	8.40	1.16
Grade	212	2	1.04
Measure			
BASC SRP-C			
Social Stress[a]	126	50.50	10.76
Anxiety[a]	126	49.60	10.87
Interpersonal Relations[a]	126	47.38	12.76
Depression[a]	126	53.43	11.74
BASC TRS-C			
Externalizing Problems[a]	197	54.70	12.31
Internalizing Problems[a]	197	53.80	12.02
School Problems[a]	197	58.52	11.30
SPPC			
Social Acceptance	124	2.68	0.82
Global Self-Worth	124	3.09	0.91

Table 1 *(continued)*

Means and Standard Deviations for All Participants

	Total Sample		
Measure	N	M	SD
PSPC			
Peer Acceptance	74	3.19	0.77
SSBD			
% of Alone Behavior	185	7.51	13.01
% of Negative Behavior	185	1.96	4.38

Note. [a] Reported as T-scores.

Table 2

Means and Standard Deviations for Students with Internalizing Problems

	Students with Internalizing Problems		
Age and Grade	N	M	SD
Age (year and month)	22	8.58	1.16
Grade	22	3	1.04
Measure			
BASC SRP-C			
Social Stress[a]	14	55.57	9.06
Anxiety[a]	14	56.36	12.76
Interpersonal Relations[a]	14	41.28	12.83
Depression[a]	14	56.29	12.41
BASC TRS-C			
Externalizing Problems[a]	22	50.68	5.53
Internalizing Problems[a]	22	70.23	11.95
School Problems[a]	22	61.00	9.12
SPPC			
Social Acceptance	14	2.25	0.64
Global Self-Worth	14	3.14	1.01

Table 2 *(continued)*

Means and Standard Deviations for Students with Internalizing Problems

	Students with Internalizing Problems		
Measure	N	M	SD
PSPC			
Peer Acceptance	7	2.45	1.29
SSBD			
% of Alone Behavior	17	16.95	21.82
% of Negative Behavior	17	1.82	5.60

Note. [a] Reported as T-scores.

Table 3

Means and Standard Deviations for Students with Externalizing Problems

	Students with Externalizing Problems		
Age and Grade	N	M	SD
Age (year and month)	32	8.25	1.12
Grade	32	2.38	0.98
Measure			
BASC SRP-C			
Social Stress[a]	17	51.76	12.23
Anxiety[a]	17	49.59	10.77
Interpersonal Relations[a]	17	44.41	15.62
Depression[a]	17	57.12	13.20
BASC TRS-C			
Externalizing Problems[a]	32	68.13	7.75
Internalizing Problems[a]	32	52.16	4.89
School Problems[a]	32	65.69	7.76
SPPC			
Social Acceptance	17	2.70	0.75
Global Self-Worth	17	3.06	0.87

Table 3 *(continued)*

Means and Standard Deviations for Students with Externalizing Problems

	Students with Externalizing Problems		
Measure	N	M	SD
PSPC			
Peer Acceptance	14	3.42	0.48
SSBD			
% of Alone Behavior	29	4.59	7.51
% of Negative Behavior	29	2.90	4.31

Note. [a] Reported as T-scores.

Table 4

Means and Standard Deviations for Students with Combination Problems

	Students with Combination Problems		
Age and Grade	N	M	SD
Age (year and month)	27	8.59	1.10
Grade	27	2.81	0.88
Measure			
BASC SRP-C			
Social Stress[a]	16	51.56	11.66
Anxiety[a]	16	50.50	10.91
Interpersonal Relations[a]	16	46.44	12.47
Depression[a]	16	57.50	12.49
BASC TRS-C			
Externalizing Problems[a]	27	72.74	10.54
Internalizing Problems[a]	27	70.89	9.14
School Problems[a]	27	67.63	9.48
SPPC			
Social Acceptance	16	2.69	0.88
Global Self-Worth	16	2.95	0.78

Table 4 *(continued)*

Means and Standard Deviations for Students with Combination Problems

	Students with Combination Problems		
Measure	N	M	SD
PSPC			
Peer Acceptance	7	3.47	0.66
SSBD			
% of Alone Behavior	21	10.65	18.79
% of Negative Behavior	21	2.36	4.51

Note. [a] Reported as T-scores.

Table 5

Means and Standard Deviations for Students without Behavioral Problems

	Students without Behavioral Problems		
Age and Grade	N	M	SD
Age (year and month)	116	8.37	1.23
Grade	116	2.52	1.10
Measure			
BASC SRP-C			
Social Stress[a]	68	48.53	10.09
Anxiety[a]	68	47.72	10.33
Interpersonal Relations[a]	68	48.78	12.39
Depression[a]	68	51.37	10.93
BASC TRS-C			
Externalizing Problems[a]	116	47.56	5.51
Internalizing Problems[a]	116	47.16	5.44
School Problems[a]	116	53.96	10.48
SPPC	68	48.53	10.09
Social Acceptance	68	47.72	10.33
Global Self-Worth	68	48.78	12.39

Table 5 (*continued)*

Means and Standard Deviations for Students without Behavioral Problems

	Students without Behavioral Problems		
Measure	N	M	SD
PSPC			
Peer Acceptance	41	3.14	0.71
SSBD			
% of Alone Behavior	105	5.73	9.31
% of Negative Behavior	105	1.57	4.21

Note. [a] Reported as T-scores.

Correlational Analyses

Table 6 presents the correlations between the predictor variables and the outcome variables. The decision to include certain BASC SRP-C variables was made based on their correlational strength with the dependent variables used in the regression analyses (Internalizing Problems Composite, Externalizing Problems Composite, and Behavioral Symptoms Index). Only the four composite variables on the BASC SRP-C were entered into the correlation matrix as it was found, not surprisingly, that the subscales that formed the specific composites, for example Attitude Toward School and Attitude Toward Teachers under the common composite of School Maladjustment, tended to correlate very highly with each other ($r = .726$, $p < .001$). The Clinical Maladjustment Composite and the Emotional Symptoms Index were highly correlated ($r = .909$, $p < .001$) and were thought to be measuring the same construct therefore the Clinical Maladjustment Composite was dropped from further analysis.

A closer look at the distributional properties of the measures revealed that the Internalizing and Externalizing Composites on the BASC TRS-C, the School Maladjustment, and Personal Adjustment Composites on the BASC SRP-C and the Total Percentage of Negative and Alone Behavior scores on the SSBD were not normal. Square root transformations were performed on the above measures and only the transformed scores were used in subsequent analyses. Unlike the other variables, the Personal Adjustment Composite score was negatively skewed therefore before the

scores were transformed, scores were reflected by subtracting the actual score from X, where X was equal to the largest score + 1 (Tabachnick & Fidell, 1996).

As indicated in Table 6 children who expressed a significant school maladjustment had a tendency to be rated high on externalizing problems and overall (combination of internalizing and externalizing) behavioral symptoms by their teachers. Students who perceived themselves to be experiencing personal adjustment problems (i.e., problems with interpersonal relationships) also received high scores on overall behavioral symptoms. Scores on the Emotional Symptoms Index, which includes depression and sense of inadequacy was correlated with teacher ratings of externalizing problems, internalizing problems, as well as overall behavioral symptoms. The additional self-perception variables such as the Social Acceptance and Global Self-worth subscales on the SPPC, were not significantly correlated with any of the teacher ratings of behavioral problems and were therefore not included in the analyses.

Students who spent time alone during recess were perceived by their teacher to be having internalizing problems and overall behavioral symptoms. Those children observed to be partaking in negative interactions with peers on the playground were also rated by their teachers as having externalizing problems and overall behavioral symptoms. Children's age did not correlate significantly with any of the teacher ratings of behavior, self-perception, or behavioral observation variables.

Table 6

Correlations between Social Competence Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.
Control Variables									
1.Age	1.00	.042	.123	.084	-.041	-.037	-.026	-.154*	-.007
Teacher-ratings of beh.									
2.Externalizing Problems		1.00	.480**	.839**	.338**	.160	.226*	-.004	.352**
3.Internalizing Problems			1.00	.759**	.080	.162	.266**	.234**	.103
4.Behavioral Symptoms				1.00	.314**	.237**	.292**	.214**	.294**
Self-perception									
5.School Maladjustment					1.00	.651**	.587**	.111	.235**
6.Personal Adjustment						1.00	.754**	.056	.197
7. Emotional Symptoms							1.00	.075	.192*
Behavioral Observations									
8. % of total Alone								1.00	-.027
9. % of total Negative									1.00

Note. *p < .05. **p < .01

Predicting Teacher-rated Behavioral Problems

Fixed-order regression analyses were used to examine the additional contribution of each independent variable in predicting the dependent variables. The independent variables included self-perceptions and behavioral observations. The dependent variables were the Externalizing Problems Composite, Internalizing Problems Composite, and Behavioral Symptoms Index on the BASC TRS-C. In all regression analyses, Age (in months) was entered first as the control variable. The independent variables were entered into the regression analyses based on their relative correlational strength with the dependent variable such that the independent variable with the highest correlation was entered first followed by the second highest correlation and so on. Only the independent variables that correlated at .05 level or less with the dependent variable were entered into the regression.

The regression analyses for the dependent variables were executed in two parts. In Part A, the control variable was entered followed by the independent variables separately for self-perception to determine the unique contribution of self-perception in predicting teacher rated behavior. In Part B, the control variable was entered followed by the independent variables separately for behavioral observations. Finally, in Part C, the significant variables from Part A and B analyses were entered into the regression analysis with the control variable to determine the joint contribution of both self-perception and behavioral observation variables in predicting teacher ratings of behavior.

Externalizing Problems

Table 7 provides the results from the fixed-order regression analyses with the Externalizing Problems Composite as the dependent variable. The R^2, standardized beta coefficient, and significance levels are reported in the tables. The control variable accounted for an insignificant amount of variance in Parts A, B, and C.

After entering the control variable into the regression analysis, first the self-perception variables School Maladjustment and then the Emotional Symptoms Index were entered into the regression. The self-perception variables accounted for 11.4% of the variance. Only School Maladjustment accounted for a significant amount of the variance in Externalizing Problems, F_{change} (1,110) = 14.189, $p < .000$. In Part B, after entering the control variable, the behavioral observation variable of Total Percentage of Negative Behavior accounted for 12.5% of the variance. Total Percentage of Negative Behavior was a significant predictor of Externalizing Problems; F_{change} (1,108) = 24.282, $p <.000$.

In Part C, the significant self-perception variable School Maladjustment and the behavioral observation variable Total Percentage of Negative Behavior were entered into the regression. Together these variables accounted for 21.7% of the variance in Externalizing Problems. Both Percentage of Total Negative Behavior and School Maladjustment remained significant predictors of Externalizing Problems, F_{change} (1,109) = 13.555, $p < .000$. Therefore, in the current sample, these were the social competence variables considered to be the best predictors of teacher ratings of externalizing problems.

Table 7

Hierarchical Regression Analysis for Variables Predicting Externalizing Problems

Predictor Variable	Part A *n*=111	Part B *n*=109	Part C *n*=110
Control Variable			
Age	-.067	.045	-.062
R^2	.004	.002	.004
Self-perception			
School Maladjustment	.335***		.344***
Emotional Symptoms	.048		
R^2	.118		.122
Behavioral Observations			
Total % of Negative		.353***	.323***
R^2		.127	.221**

Note. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Internalizing Problems

Table 8 provides the results from the fixed-order regression analyses with the Internalizing Problems Composite as the dependent variable. The R^2, standardized beta coefficient, and significance levels are reported in the tables. The control variable accounted for an insignificant amount of variance in Parts A, B, and C.

After entering the control variable into the regression analysis, the self-perception variable Emotional Symptoms Index was entered into the regression. The self-perception variable accounted for 6.9% of the variance, $F_{change}(1,110) = 8.471, p < .01$. In Part B, after entering the control variable, the behavioral observation variable of Total Percentage of Alone Behavior accounted for 6.8% of the variance. Total Percentage of Alone Behavior was a significant predictor of Internalizing Problems; $F_{change}(1,108) = 12.463, p < .01$.

In Part C, the self-perception variable Emotional Symptoms Index and the behavioral observation variable Total Percentage of Alone Behavior were entered into the regression. Together these variables accounted for 11.8% of the variance in Internalizing Problems. Both Percentage of Total Alone Behavior and Emotional Symptoms Index remained significant predictors of Internalizing Problems, $F_{change}(1,109) = 6.103, p < .05$. Therefore, in the current sample, these were the social competence variables considered to be the best predictors of teacher ratings of internalizing problems.

Table 8

Hierarchical Regression Analysis for Variables Predicting Internalizing Problems

Predictor Variable	Part A n=111	Part B n=109	Part C n=109
Control Variable			
Age	-.081	.115	-.084
R^2	.007	.013	.007
Self-perception			
Emotional Symptoms	.264**		.258**
R^2	.076		
Behavioral Observations			
Total % of Alone		.265**	.229**
R^2		.081	.125

Note. *$p < .05$.**$p < .01$. ***$p < .001$.

Behavioral Symptoms Index

Tables 13 to15 present the results from fixed-order regression analyses with Behavioral Symptoms Index as the dependent variable. The R^2, standardized beta coefficient, and significance levels are reported in the tables. The control variable accounted for an insignificant amount of variance in Parts A, B, and C. Once the control variable was accounted for in Part A, the self-perception variables School Maladjustment Composite, Emotional Symptoms Index, and Personal Adjustment Composite were entered into the regression analysis. Together, they accounted for 13.2% of the variance. Only the School Maladjustment Composite was a significant predictor of the Behavioral Symptoms Index, $F_{change}(1,110) = 11.859, p < .01$. Once the control variable had been entered in Part B, the behavioral observation variables were entered into the regression analysis with Total Percentage of Negative Behavior entered first and Total Percentage of Alone Behavior second. Together they accounted for 14.6% of the variance. Both the Percentage of Total Alone Behavior and Percentage of Total Negative Behavior were significant predictors of the Behavioral Symptoms Index $F_{change}(1,108) = 11.733, p < .01$.

In Part C, the significant variables from Parts A and B analyses accounted for an additional 22% of the variance in the Behavioral Symptoms Index. School Maladjustment, and Both Percentage of Total Alone and Total Negative Behavior remained significant predictors of the Behavioral Symptoms Index, $F_{change}(1,108) = 4.587, p < .05$. In conclusion, based on the current sample, the best predictors of teacher ratings of overall behavioral symptoms were the percentage of time a student

spent alone and percentage of time spent in negative interactions on the playground as well as their score on the School Maladjustment Composite on the BASC SRP-C.

Table 9

Hierarchical Regression Analysis for Variables Predicting Overall Behavioral Problems

Predictor Variable	Part A *n*=111	Part B *n*=109	Part C *n*=109
Control Variable			
Age	-.131	.078	-.120
R^2	.017	.006	.014
Self-perception			
School Maladjustment	.307***		.336***
Emotional Symptoms	.166		
Personal Adjustment	-.096		
R^2	.132		
Behavioral Observations			
Total % of Negative		.295**	.280**
Total % of Alone		.248**	
R^2		.152	.187*

Note. *$p < .05$.**$p < .01$. ***$p < .001$.

CHAPTER FIVE

Discussion

In this last chapter, the results from the current investigation will be interpreted and discussed in relation to past theory and research. As well, the limitations of the current study will be evaluated. Lastly, directions for future research will be presented along with implications for program development.

Interpretation of Results

The main purpose of this investigation was twofold. First, the study sought to examine group differences between students with externalizing, internalizing, a combination of externalizing and internalizing problems, and students without behavioral problems with respect to self-perceptions, behavioral observations, and school problems. Group differences were a focus in this study because much of the literature concerned with an EBD population recognizes that there are distinct social competence differences between students with externalizing and internalizing problems (e.g., Dodge, 1980; Ladd & Troop-Gordon, 2003), however less is known about the social competence of children with a combination of internalizing and externalizing problems (Ladd & Burgess, 1999; Renouf et al., 1997). Therefore, the current study included a combination group in the analyses. Second, this study simultaneously examined the effects of two estimates of social competence – observed peer interactions and self-perceptions, on teacher ratings of behavioral problems. The rationale for including this second component was influenced by Flanagan et al. (2003) who suggested that research with young children should

include multiple methods and informants. However as these authors and others (e.g., Kraemer et al., 2003; Stranger & Lewis, 1993) have pointed out, deciding what are the important contributors to estimates of children's functioning is often difficult to determine. As such, this study endeavored to determine the extent to which social competence estimates (behavioral observations and self-perceptions) predict teacher ratings of behavior.

Behavioral Subgroup Comparisons

Self-Perceptions of Students with Externalizing, Internalizing, and Combination Problems

The self-perceptions of students with externalizing problems in the current sample did not differ from their peers without behavioral problems. This finding was not surprising given the literature in the area of self-perception that indicates students with externalizing problems do not tend to perceive themselves as having problems with social interactions (Dodge, 1980; Hymel et al., 1990; Ladd & Troop-Gordon, 2003). Despite the teacher ratings that indicated these students were overly aggressive with their peers, had difficulty following classroom rules, and were disruptive and hyperactive, the externalizing students in this sample did not view themselves as having interpersonal relationship problems, emotional problems, or to be experiencing social stress. In fact, this group saw themselves as socially accepted by their peers. Although not directly tested in this study, from a social information-processing point of view, these are the students who may be making inaccurate judgments about the social cues in their environment. The inaccuracy of their

judgments about their social environment has been suggested by Dodge (1980), Orobio de Castro et al. (2002), and Quiggle et al. (1992) to represent problematic attributions of intent toward their peers. For example, this group may perceive their peers intent in social interactions as being hostile in nature and therefore, externalizing students have a tendency to act in a negative way toward their peers while underestimating their own social deficits.

Significant differences between students with internalizing problems and students without behavioral problems were found on a measure of self-perceived anxiety. In the current sample, students considered themselves to be experiencing a significant degree of anxiety, which is in line with Coleman, and Webber's (2002) and Merrell's (2001) description of children with internalizing problems. The current finding is supported in the literature by Boivin and Begin (1989) and Hymel et al. (1990) who have suggested that students with internalizing problems tend to view themselves as experiencing significantly more anxiety when compared to their peers. However, the current findings indicated that students with internalizing problems did not report more depression, social stress, or poor interpersonal relations than their peers without behavioral problems. The students with internalizing problems reported less social acceptance among peers on average; however, their mean was not significantly different than that of their peers without behavioral problems. It is possible that the small sample size of the students with internalizing problems masked possible group differences.

The students with combination problems in the current sample had both internalizing and externalizing profiles. These students were expected to have scores on self-perception measures that were significantly lower than their peers without behavioral problems, however this was not the case. Very few studies have examined self-perceptions in a combination population, especially those in the early elementary grades. Ladd and Burgess (1999) examined loneliness and social satisfaction in students with combination problems of aggression and withdrawal and found that they reported more loneliness and social dissatisfaction with peer relations than the aggressive group or the withdrawn only group. Renouf et al. (1997) also reported similar results for a group of students with combination problems on a measure of self-esteem. Clearly, based on the inconsistency between the present study and the two aforementioned studies there is a need for further investigation into the self-perceptions of students who are considered by their teachers to have a combination of internalizing and externalizing problems. It is highly likely that discrepancies in findings may be due to the different methods used to estimate problematic behavior profiles and self-perceptions.

Self-perceptions of young children

As theorized by Harter (1990), the self-perceptions of the younger children under the age of 8 were largely unrelated to their teacher ratings of behavior. Regardless of whether or not their teachers considered them to have significant internalizing or externalizing problems, these children did not differ when compared to age mates without behavioral problems on perceptions of peer acceptance. While

Marsh et al. (1998; 2002) argued that younger children are able to differentiate between various indices of competence, the children in the current study were not able to differentiate between perceived and actual social performance based on their mean scores on the PSPC. What is left unanswered by the current study is whether or not the same results would hold using a different measure of peer acceptance for young children. Replication studies that target this developmental age group are necessary in order to discern whether we are dealing with an issue of poor psychometric properties as argued by Marsh et al. 1998, or a distinct cognitive maturation level that does not allow for an accurate assessment of one's social competencies.

Behavioral Observations of Students with Externalizing, Internalizing, and Combination Problems

Group differences between the students with externalizing problems and the students without behavioral problems on measures of negative behavior on the playground were not evident in the current sample. While these students, spent on average, more time engaged with peers in a negative way (verbal and physical aggression) than their peers without behavioral problems, the difference was not significant. The discrepancy between the current findings and others (e.g., Shinn et al. 1987) may be attributed to the very small sample sizes used in the current study. However, the current findings partially support those reported by Wright et al. (1999) which demonstrated that a group of children with externalizing problems differed little from a group without behavioral problems based on overall negative interactions

but engaged in more negative behavior than a the children without behavioral problems during specific situations in which the students were being teased or threatened by their peers.

When looking at the behavioral observation results, the students with internalizing group in the current sample spent significantly more time alone on the playground than their peers without behavioral problems. The Wright et al. (1999) study, suggested that students with internalizing problems demonstrated elevated withdrawal only to aversive situations (i.e., when being teased by peers). This is somewhat different than in the current study where it was found that during free play periods, students with internalizing problems were more likely than their peers without behavioral problems to spend their time alone rather than interacting with other students. Results from the two studies are difficult to compare because the observational methods were dissimilar. In addition, the current study set out to capture peer interactions during free play while most of the observations in the Wright et al. (1999) study were conducted during structured classroom activities and sought to measure not only interactions with peers but interactions with teachers and other adults.

Finally, the results of the current study are similar to those found in the Walker and Severson (1992) study. Walker and Severson (1992), who are the creators of the SSBD, attempted to replicate the SSBD procedure using all three stages of the assessment tool. The third stage involves observations of students with internalizing and externalizing problems using the PSB. As with the current findings, the Walker

and Severson (1992) results suggested that students with internalizing problems spent a significant amount of time alone during free play when compared to students without behavioral problems.

Spending time alone, when considered in light of the social information processing theory put forth by Crick and Dodge (1994), would further prevent these children from developing the experience and skills necessary to engage in successful peer interactions. According to Wright et al. (1999) children with internalizing problems may have a tendency to demonstrate withdrawal or passivity in social situations that require assertive behavior, for example, during a dispute over rules in a game or when confronted by a bully. Their tendency to avoid aversive situations may appear to be a protective factor and somewhat adaptive in that the situation is temporarily averted. However, as Quiggle et al., (1992) point out and the current results support, chronic avoidance may inevitably become more of a hindrance than an adaptation because these children miss opportunities to learn the skills necessary to effectively interact with peers.

While students with combination problems demonstrated more negative interactions and spent more time alone than the students without behavioral problems, this difference was not significant. Once again, the failure to find significant group differences may have been due to the small sample size of combination students in the current sample. Few studies have used behavioral observations and groups of students with combination problems (e.g., Rudolph et al., 1994; Wright et al., 1999) however, those that have, agree that students with combination problems have

characteristics of both students with pure internalizing and pure externalizing problems in addition to unique behavioral characteristics that cause their peers and teachers to deem them as more deviant than either of the other two groups alone.

School Problems

When the students with internalizing, externalizing, and combination problems were compared to the group of students without behavioral problems on teacher ratings of school problems (attention and learning problems) a significant difference between groups emerged. The students with combination problems had the most school related problems in the current sample and this was congruent with past findings that suggested students with both internalizing and externalizing problems were seen by their teachers as having a significant degree of both social competence and academic problems (Anderson, 2001; Quiggle et al., 1992; Renouf et al.,1997; Rudolph et al., 1994). When planning interventions for children with both academic difficulties and EBD, it is important to differentiate between which of the two difficulties emerged first. For children whose primary problem lies with a learning disability or attentional deficit, addressing these issues first may alleviate some of the emotional and behavioral problems they are experiencing. On the other hand, children who are experiencing severe emotional and behavioral problems may not benefit from interventions that target learning or attentional deficits alone.

Self-perceptions and Behavioral Observations as Predictors of Teacher Ratings of Behavior

The use of self-report data with elementary students has received mixed support in the literature (see Kraemer et al., 2003 for a review). Low correspondence among informants is not uncommon, especially between adults and children (Kolko & Kazdin, 1993). This pattern is most evident with younger children as studies have shown that correspondence between a child's perspective and a teacher's rating of performance increases with age (Marsh et al., 1998). However, as Kolko and Kazdin (1993) have pointed out, including self-perceptions can provide an important estimate of "where the child is at" with respect to their ability to provide reliable estimates of internal states and their understanding of the social environment. This notion is important when we turn to program and intervention planning because in order for interventions to be effective, we must take into consideration how the child perceives his or her social environment (Kraemer et al., 2003). Since a child's teacher is considered the most common informant for assessing EBD in a school setting, the current study used teacher reports of students internalizing, externalizing, and overall behavioral symptoms as the dependent variables. In the current study, self-perceptions were operationalized by the composite scores School Maladjustment, Personal Adjustment, and Emotional Symptoms Index on the BASC SRP-C.

Behavioral observations are considered to be the most ecologically valid estimates of children's peer interactions (Kamphaus & Frick, 2002; Merrell, 2001). However, they are often omitted from the assessment of social interactions because of

the time and resources they incur. Two variables from the behavioral observation system in the current study were chosen as predictors of teacher rated behavioral problems: Percentage of Total Alone and Total Negative Behavior. These variables were chosen instead of more prosocial indices of peer interactions because studies that have used behavioral observations (e.g., Shinn et al., 1987; Walker et al., 1990) have demonstrated that negative and isolative behavior are the strongest predictors of teacher-ratings of behavior overall.

When externalizing problems was considered the dependent variable, the only significant self-perception predictor that emerged was School Maladjustment which is an estimate of the child's attitude toward school and their teachers. Percentage of Total Negative Behavior also significantly predicted externalizing problems. When combined both School Maladjustment and Total Negative Behavior remained significant predictors of externalizing problems. This finding is commensurate with the literature that suggests a strong link between EBD and school problems (Trout et al. 2003), especially for students with externalizing problems (Newcomer & Barenbau, 1995). Children with poor attitudes toward school and their teachers may be experiencing a significant amount of dissatisfaction and disconnection within the school setting. Disconnection between the student and the adults primarily involved in the student's education and discipline (e.g., teacher, teacher's aide, or principal) should be taken into account when designing interventions for this specific EBD population. Students with externalizing problems may respond better to interventions that utilize both in and out of school resources such as community mediated

mentoring programs to develop more effective and satisfying relationships with adults.

The Emotional Symptoms Index emerged as the only significant self-perception variable predictive of teacher-rated internalizing problems. The Emotional Symptoms Index takes into account a child's feelings of depression and sense of inadequacy in social functioning. Percentage of Total Alone Behavior was the only behavioral observation variable predictive of internalizing problems. When combined, both the Emotional Symptoms Index and Percentage of Alone Behavior remained significant predictors of teacher-rated internalizing problems. This finding is in line with the literature that suggests children with internalizing disorders are characterized by an overall sad or depressed affect and behaviorally, appear to be social disengaged or withdrawn (e.g., Coleman & Webber, 2002; Merrell, 2003). Students with internalizing problems, especially in the age range represented by the current sample, might benefit from a buddy system that has them paired with another child in their class to play with at recess, and additional adult assistance to initiate participation in small group activities both in the classroom and on the playground.

The self-perception variable most predictive of overall teacher-rated behavioral problems included the School Maladjustment Composite. Both Percentage of Negative and Alone Behavior made significant contributions to the prediction of overall teacher rated behavioral problems. All three of these variables remained significant predictors of overall behavioral problems when combined. Clearly, these students appear to have qualities of both internalizing and externalizing

students which supports an additive problems model (Quiggle et al., 1992). Interventions designed to address the social competence deficits in these children would have to take into account that not only do they harbor negative feelings toward the school setting; they have ineffective interactions with peers on the playground.

In conclusion, based on the results of the current study, both self-perceptions and behavioral observations appear to be predictors of teacher-ratings of internalizing and externalizing problems, however their individual contributions were small. The results provide support for including a multifaceted approach to assessing social competence in elementary students which would include both self-perceptions and observations of peer interactions on the playground. The results also provide additional support for the inclusion of a combination group in assessing EBD as these students appear to have distinct differences in social competence outcomes when compared to students with internalizing or externalizing problems alone (Rudolf et al., 1994; Renouf et al., 1997; Ladd & Burgess, 1999; Ladd & Troop-Gordon, 2003; Wright et al., 1999). Implied in these findings is the need for clinicians and researchers alike to make careful decisions when assessing young elementary students who have EBD. The use of a multi-faceted assessment is encouraged, as this appears to be a heterogeneous group who demonstrate unique trends in their ability to make accurate self-perceptions and have varying ability to interact successfully with peers on the playground. Furthermore, elementary students with EBD will have intervention needs that are complex and will likely require a multifaceted treatment

approach that takes into account their individual social competence strengths and weaknesses.

Limitations

While many of the findings in the present investigation are supported by past theory and research, caution should be taken when generalizing the findings to other settings or populations due to the following limitations. As mentioned earlier, when students were subdivided into EBD categories the current study yielded small sample sizes, which may have contributed to a decrease in statistical power when examining group differences. As such, the current results did not show significant hypothesized differences between groups that were supported in the literature. Another issue that arises when considering overall sample size is the limitation this placed on the option of examining gender differences. In addition, the current study conducted behavioral observations that were fairly short in duration for each child and if time and resources had permitted it would have be advantageous to increase the amount and duration of these observations. Finally, the current sample was drawn from a predominantly inner-city school population. It is therefore cautioned that the current results may not generalize to populations in middle class suburban or rural areas.

Future Directions and Implications

The results of the current study could be extended using a longitudinal design to further our knowledge of the developmental trajectories of EBD. The use of naturalistic behavioral observations is a unique component of this study that has been largely absent from longitudinal studies. A review of the literature suggests that there

are only a few exceptions (e.g., Boulton, 1999; Snyder et al., 2003) none of which studied the free play behavior of students with specific EBD profiles. A clearer understanding of the developmental trajectory of different EBD profiles and their relationship to perceived and actual peer interactions will contribute to the design of more effective assessment and early intervention programs. Early intervention programs designed to address the social competency strengths and deficits specific to the EBD profile will hopefully give these children a better chance of developing effective interactions in the school environment and beyond.

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